

ACALYPTERÆ (DIPTERA) COLLECTED IN MOBILE COUNTY, ALABAMA.

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LOCALITIES.

Gulcrest. Twenty-five miles northwest of Mobile. Elevation 100 feet. The records are all the result of one afternoon collecting, Nov. 4, 1916. The locality was a sandy hillside, and a stream bordered by a narrow swamp.

Saraland. Ten miles north of Mobile. At edge of Mobile River swamp. Oct. 26 and 27, 1916. Two collecting grounds: one was along the banks of a stream and in the open bog near it, just at the limit of the tidewater region; the other was a few miles west, and on a dry sandy hillside.

Mobile. All collecting was done the morning of Oct. 24, 1916, along a road through the thick swamp north of the city. Garbage heaps were investigated in this swamp.

Springhill. Ten miles west of Mobile. Nov. 1, 1916. Chiefly dry sandy hills, but some specimens from open bogs.

Coden. On the coast, ten miles east of the Mississippi line. One afternoon, Oct. 22, 1916. Beach, brackish marsh, and fresh-water bog back half a mile from the shore.

Kushla. Eleven miles northwest of Mobile. June and July, 1914; April, 1915; Oct. 18–Nov. 8, 1916. Collecting in various kinds of localities. Fruit and fungi were very carefully examined for *Drosophilidæ*.

MICROPEZIDÆ.

Calobata lascivæ Fabr. Kushla.

SEPSIDÆ.

Sepsis violaceæ Meig. Kushla.

S. violaceæ similis Macq. Kushla, Coden.

S. pectoralis Macq. Kushla.

PIOPHILIDÆ.

Prochyliza xanthostoma Walk. Kushla.

Piophila casei Linn. Kushla.

ORTALIDIDÆ.

Rivellia variabilis Loew. Kushla.

Camptoneura picta Fabr. Kushla.

Pseudotephritis vau Say. Kushla.

Chrysomyza aenea Fabr. Kushla. An Oriental species, recorded from Louisiana by Knab (Science, n.s. 43; 76). I found it common about cut sugar-cane.

Euxesta notata Wied. Kushla, Mobile, Springhill.

Chaetopsis fulvifrons Macq. Kushla, Mobile.

Zacompsia fulva Coq. Kushla, Mobile. I have the species also from Florence, S. C. There is evidently a slip in the generic description given by Coquillett. The third antennal joint is said to be twice as wide as long, but more slender than in *Euxesta*—an obvious contradiction. It should be "twice as long as wide." The error appears also in the table of genera given in Williston's Manual (3d edition, 1908, p. 278). The form differs from all the ten species of *Euxesta* known to me in having no prescutellar bristles.

TRYPETIDÆ.

Peronyma sarcinata Loew. Saraland (2 specimens), Kushla (3 specimens), Springhill (1 specimen). The species does not seem to have been recorded since Loew described it from South Carolina. The following notes are therefore presented.

Two subequal orbitals, convergent and slightly proclinate; a third reclinate one near vertex. An inner convergent and a shorter outer divergent vertical. A long, widely divergent ocellar. Postverticals subparallel. One humeral; two notopleurals; one large and one small presutural; one supraalar; two postalars; two dorsocentrals; one scutellar pair. Two mesopleurals; one pteropleural; one sternopleural. A number of fine black hairs on lower and posterior portion of sternopleura. A tuft of small white hairs in center of propleura, and similar hairs scattered over mesopleura; no hairs on pteropleura.

One specimen has only one lower orbital on one side, 3 on the

other. One has two outer divergent verticals. In one the postverticals are black; in the others they are white, sometimes with grayish tips. In some specimens the small supraalar is missing. The posterior notopleural is always on a polished black tubercle.

There is no trace of the third dorsocentral and second scutellar pairs of bristles suggested by Loew. The scutellum has a number of white hairs.

Oedaspis atra Loew. Gulferest, Saraland, Kushla, Springhill.

Neaspilota achilleae Johnson. Saraland.

Ensina picciola Bigot. Kushla, Gulferest.

Euaresta bella Loew. Kushla, Gulferest.

Urellia mevarna Walk. Kushla, Gulferest. My series of this species and of *Ensina picciola* are not uniform in wing pattern. The two wings of the same specimen are frequently different. I am inclined to suspect that some of the species in these two groups that have been based on such differences are not valid.

LAUXANIIDÆ.

Steganopsis (Lauxania) latipennis Coq. Gulferest, Kushla, Saraland.

Lauxania trivittata Loew. Kushla, Springhill.

Minettia valida Walk. (*Sapromyza macula* Loew.) Kushla.

Camptoprosopella vulgaris Fitch. Kushla.

Trigonometopus reitculatus Johnson. Saraland (one specimen).

T. vittatus Loew. Kushla (two specimens—Oct.), agreeing with the notes made by Knab (*Psyche*, 21: 126) on his specimen from Florida.

MILICHIIDÆ.

Phleomyia pseudodecora Becker. Saraland.

P. leucogastra dispar Becker. Kushla.

?**Phyllomyza approximata** Malloch. Kushla.

AGROMYZIDÆ.

Agromyza virens Loew. Kushla. This is apparently the form described as *A. gibsoni* Malloch.

?**A. longipennis** Loew. Kushla.

GEOMYZIDÆ.

Diastata pulchra Loew. Gulfcrest.

Mumetopia occipitalis Melander. Kushla, Gulfcrest.

Rhinoessa albula Loew. This is apparently a seashore form. I have collected it also at Key West, Fla.

DROSOPHILIDÆ.

Aulacigaster leucopeza Meigen. Kushla.

Pseudophortica obesa (*Drosophila obesa* Loew; *Phortica hirtifrons* Johnson). Kushla, on persimmons. The genus *Pseudophortica* is a new one. The following are its characters.

PSEUDOPHORTICA new genus.

Arista plumose. Three large orbitals; upper two reclinate, lower proclinate and situated above middle of front. A pair of large divergent ocellars; two pairs of verticals; a pair of small widely separated convergent postverticals. Front covered with black hairs except at vertex; broad, sides nearly parallel. Face with well-developed carina; clypeus moderately large. A large vibrissa; and a stout bristle on the lower occiput, just above the lower rear corner of the head. Eyes nearly bare.

Two dorsocentrals; one prescutellar; acrostichal hairs in more than ten irregular rows; one humeral; one presutural; two notopleurals; two supraalars; two postalars; two pairs of scutellars, posterior ones crossed; one small propleural; two sternopleurals; mesopleuræ bare.

Several apical bristles on each tibia, those on the second pair larger; a few short stout apical bristles on each of the four basal tarsal joints of the second and third pairs of legs.

Costa twice broken, reaches tip of fourth vein, but is weak beyond third. Auxiliary vein rudimentary, but a shadow continues to distal costal break. Discal and second basal cells confluent. Third and fourth veins slightly divergent at tips. Wing tip rounded. Anal cell and anal vein present.

Type and only species, *Drosophila obesa* Loew.

I have examined the types of *obesa* and of *hirtifrons*, and am certain of the synonymy. I have also seen specimens from Georgia, Tennessee, and Virginia.

Leucophenga varia Walk. (*Drosophila quadrimaculata* Walk.).
Kushla.

L. maculosa Coq. Kushla. I have given this as a synonym of *quadrimaculata* Walk. (Ann. Ent. Soc. Amer., 9; 324.) This is an error, due to carelessness in checking up Walker's description.

Chymomyza amœna Loew. Kushla.

C. procnemis Williston. Kushla, Mobile.

Mycodrosophila dimidiata Loew. Kushla. The genus *Mycodrosophila* Oldenberg (Arch. Naturgesch., 80 A, 2, 4) has not hitherto been recognized from North America. *Drosophila dimidiata* Loew., *D. thoracis* Williston, and *D. projectans* Sturtevant all belong here. The genus is characterized by having the anterior pair of dorsocentrals minute or missing, and the distal costal break unusually deep. The known species are all shining black with pale-yellow markings.

Drosophila affinis Sturtevant. Kushla.

D. busckii Coq. Kushla.

D. funebris Fabr. Kushla.

D. guttifera Walk. Kushla, Gulferest.

D. melanica Sturtevant. Kushla.

D. melanissima Sturtevant. Kushla. In October, 1916, I found this species in large numbers around moist sawdust made from a living pine tree (*Pinus palustris*) by a boring beetle.

D. melanogaster Meig. Kushla, Mobile.

D. modesta Sturtevant. Kushla.

D. putrida Sturtevant. Kushla.

D. quadrata Sturtevant. Kushla.

D. repleta Wollaston. Kushla.

D. robusta Sturtevant. Kushla.

D. sigmoides Loew. Kushla, Gulferest.

D. transversa Fall. Kushla.

D. tripunctata Loew. Kushla.

D. alabamensis new species.

Arista with 5 branches above and 1 below. Antennæ large, brown; third joint large, oval, dark. Front about one half width of head, wider above; brown, triangle and orbits grayish. "Second" orbital over one half other two, placed a trifle below third. Only one prominent oral bristle. Carina very small, confined to upper part of face; face light brown. Proboscis

brown, palpi dark brown, large. Cheeks brown; their greatest width about one third greatest diameter of eyes. Eyes with short pile.

Acrostichal hairs in 6 rows; no prescutellars. Mesonotum dull brown; humeri, median stripe, pair of stripes in dorsocentral rows, and posterior pair of stripes outside the latter and joining them at the suture, grayish. Scutellum brown, with grayish border. Pleuræ dull brown. Legs yellowish brown. Apical and preapical bristles on first and second tibiæ, preapicals on third.

Abdomen dark dull brown.

Wings clear. Costal index about 2.3, fourth vein index about 2.3, 5X index about 2.0, 4C index about 1.3.

Length body $2\frac{1}{4}$ mm., wings $2\frac{1}{2}$ mm.

Holotype: Kushla, Ala., April 9, 1915. Deposited in the American Museum of Natural History.

Scaptomyza adusta Loew. Kushla, Gulfcrest.

S. graminum Fall. Kushla.

EPHYDRIDÆ.

Mosillus aeneus Fall. Kushla.

Paralimna appendiculata Loew. Kushla, Saraland.

Ochthera mantis deGeer. Gulfcrest, Kushla, Saraland.

O. tuberculata Loew. Kushla, Saraland, Mobile.

Parydra quadrituberculata Loew. Kushla.

There are a number of other Ephyridæ in the collection, not yet identified.

CHLOROPIDÆ.

Elliponeura debilis Loew. Kushla.

Chloropisca glabra Meig. (*assimilis* Macq.). Kushla.

Diplotoxa microcera Loew. Kushla.

D. versicolor Loew. Gulfcrest, Kushla, Saraland, Coden.

Ceratobarys eulophus Loew. Kushla.

Elachiptera costata Loew. Kushla.

Melanochaeta longula Loew. Kushla.

M. nigricornis Loew. Kushla, Mobile.

Hippelates flavipes pusio Loew. Kushla.

H. subvittatus Malloch. Kushla, Saraland.

H. texanus Malloch. Gulfcrest, Kushla, Saraland, Springhill, Mobile, Coden.

Siphonella cinerea Loew. Springhill.

Tricimba (Notonaulax) cincta Meig. Kushla.

Oscinella coxendix Fitch. Gulferest, Kushla, Saraland, Springhill,
Mobile, Coden.

O. frit pusilla Meig. (*carbonaria* Loew). Kushla, Mobile.

BORBORIDÆ.

Borborus equinus Fall. Kushla.

? *B. neglectus* Malloch. Kushla, Springhill.

? *Leptocera ferruginata* Stenh. Kushla.

Also a number of unidentified species of *Leptocera*.

SCIOMYZIDÆ.

Sciomyza nana Fall. Mobile, Coden.

S. pubera Loew. Mobile.

Tetanocera umbrarum Linn. Kushla, Mobile.

T. arcuata Loew. Saraland.

HELOMYZIDÆ.

Helomyza quinquepunctata Say. Kushla (April).

SYNOPTIC KEY TO THE SUBFAMILIES OF MIRIDÆ
(HEMIPTERA-HETEROPTERA).

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In preparing a paper on the Miridæ of Connecticut the writer was confronted with the necessity of preparing suitable keys for the determination of the species. The first big problem was to prepare a workable key for separating the subfamilies and the respective tribes. Reuter (1910) in his "Phylogenie und Systematik der Miriden" has given a classification of the subfamilies and divisions of Miridæ but no other worker has as yet been able to make practical use of his keys. We must give Reuter great credit for pointing out the characters by which the subfamilies should be separated but it is unfortunate he was unable to prepare tables that could be readily